

UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner: Group: Attorney Docket # 2088

Applicant(s) : PEUCHERT, U., ET AL

Serial No. : :

Filed : :

For : BOROSILICATE GLASS WITH HIGH CHEMICAL
RESISTANCE AND USE THEREOF

SIMULTANEOUS AMENDMENT

March 19, 2002

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

S I R S:

Simultaneously with filing of the above identified application
please amend the same as follows:

In the Claims:

Cancel all claims without prejudice.

Substitute the claims attached hereto.

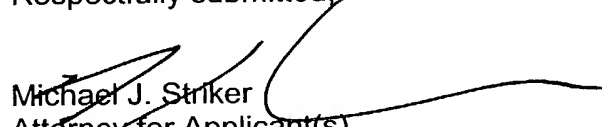
REMARKS:

This Amendment is submitted simultaneously with filing of the above identified
application.

With the present Amendment applicant has amended the claims so as to eliminate
their multiple dependency.

Consideration and allowance of the present application is most respectfully requested.

Respectfully submitted,


Michael J. Striker
Attorney for Applicant(s)
Reg. No. 27233

WO 02/08134

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PCT/EP01/08285

PATENT CLAIMS

1. A borosilicate glass of high chemicals resistance,
 characterized by a composition (in % by weight, based
 5 on oxide) of:

	SiO ₂	70 - 77
	B ₂ O ₃	6 - < 11.5
	Al ₂ O ₃	4 - 8.5
10	Li ₂ O	0 - 2
	Na ₂ O	4 - 9.5
	K ₂ O	0 - 5
	with Li ₂ O + Na ₂ O + K ₂ O	5 - 11
	MgO	0 - 2
15	CaO	0 - 2.5
	with MgO + CaO	0 - 3
	ZrO ₂	0 - < 0.5
	CeO ₂	0 - 1

20 and, if appropriate, standard refining agents in
 standard amounts.

2. The borosilicate glass as claimed in claim 1,
 characterized by a composition (in % by weight, based
 25 on oxide) of:

	SiO ₂	70.5 - 76.5
	B ₂ O ₃	6.5 - < 11.5
	Al ₂ O ₃	4 - 8
30	Li ₂ O	0 - 1.5
	Na ₂ O	4.5 - 9
	K ₂ O	0 - 5
	with Li ₂ O + Na ₂ O + K ₂ O	5.5 - 10.5
	MgO	0 - 1
35	CaO	0 - 2
	with MgO + CaO	0 - 3
	ZrO ₂	0 - < 0.5
	CeO ₂	0 - 1

and, if appropriate, standard refining agents in standard amounts.

3. The borosilicate glass as claimed in claim 1 [or 2]
 5 characterized in that it additionally contains (in % by weight, based on oxide):

	SrO	0 - 1.5
	BaO	0 - 1.5
10	with SrO + BaO	0 - 2
	ZnO	0 - 1.

4. The borosilicate glass as claimed in [at least one of claims 1 to 3, ^{claim 1} characterized in that it additionally
 15 contains (in % by weight, based on oxide):

	Fe ₂ O ₃ + Cr ₂ O ₃ + CoO	0 - 1
	TiO ₂	0 - 3.

- 20 5. The borosilicate glass as claimed in [at least one of claims 1 to 4, ^{claim 1} characterized in that, apart from inevitable impurities, it is free of As₂O₃ and Sb₂O₃.

6. The borosilicate glass as claimed in [at least one
 25 of claims 1 to 5, ^{claim 1} having a coefficient of thermal expansion $\alpha_{20/300}$ of between > 5 and $6.0 \times 10^{-6}/K$, in particular between > 5.3 and $5.9 \times 10^{-6}/K$, and a working point V_A of at most $1180^\circ C$.

- 30 7. The use of the borosilicate glass as claimed in [at least one of claims 1 to 6, ^{claim 1} as sealing glass for Fe-Co-Ni alloys.

8. The use of the borosilicate glass as claimed in [at
 35 least one of claims 1 to 6, ^{claim 1} as instrument glass for laboratory applications and for the construction of chemical installations.

8. The use of the borosilicate glass as claimed in (at least one of claims 1 to 6) ^{claim 1} as primary packaging material for pharmaceuticals, for example as ampoule glass.

PATENT CLAIMS

1. A borosilicate glass of high chemicals resistance,
characterized by a composition (in % by weight, based
5 on oxide) of:

	SiO ₂	70 - 77
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	K ₂ O	0 - 5
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- 20 and, if appropriate, standard refining agents in
standard amounts.

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characterized by a composition (in % by weight, based
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	MgO	0 - 1
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and, if appropriate, standard refining agents in standard amounts.

3. The borosilicate glass as claimed in claim 1, ,
5 characterized in that it additionally contains (in % by weight, based on oxide):

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	BaO	0 - 1.5
10	with SrO + BaO	0 - 2
	ZnO	0 - 1.

4. The borosilicate glass as claimed in
claim 1, characterized in that it additionally
15 contains (in % by weight, based on oxide):

	$\text{Fe}_2\text{O}_3 + \text{Cr}_2\text{O}_3 + \text{CoO}$	0 - 1
	TiO_2	0 - 3.

- 20 5. The borosilicate glass as claimed in
claim 1, characterized in that, apart from
inevitable impurities, it is free of As_2O_3 and Sb_2O_3 .

6. The borosilicate glass as claimed in
25 claim 1 having a coefficient of thermal
expansion $\alpha_{20/300}$ of between > 5 and $6.0 \times 10^{-6}/\text{K}$, in
particular between > 5.3 and $5.9 \times 10^{-6}/\text{K}$, and a working
point V_A of at most 1180°C .

- 30 7. The use of the borosilicate glass as claimed in
claim 1, as sealing glass for
Fe-Co-Ni alloys.

8. The use of the borosilicate glass as claimed in
35 claim 1 as instrument glass for
laboratory applications and for the construction of
chemical installations.

8. The use of the borosilicate glass as claimed in claim 1 as primary packaging material for pharmaceuticals, for example as ampoule glass.